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	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.78	▲ \$ 0.01	▲ \$ 0.02

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 40.59	▼ \$ (0.37)	▲ \$ 0.1

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 42.71	▼ \$ (0.45)	▼ \$ (0.0)

00z GWDD Change

Cooler Change

Warmer Change

ECMWF Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	-1.0	-3.9	2.1	-2.8
24 Hr Chg	-1.8	-5.9	1.4	-6.3

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	-3.4	0.9	4.2	1.7
24 Hr Chg	-2.1	-5.1	0.4	-6.9

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	87.9	▼ -0.48	▲ 2.13

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	30.8	▲ 1.53	▲ 0.87

	Current	Δ from YD	Δ from 7D Avg
US ResComm	17.9	▲ 3.18	▲ 6.34

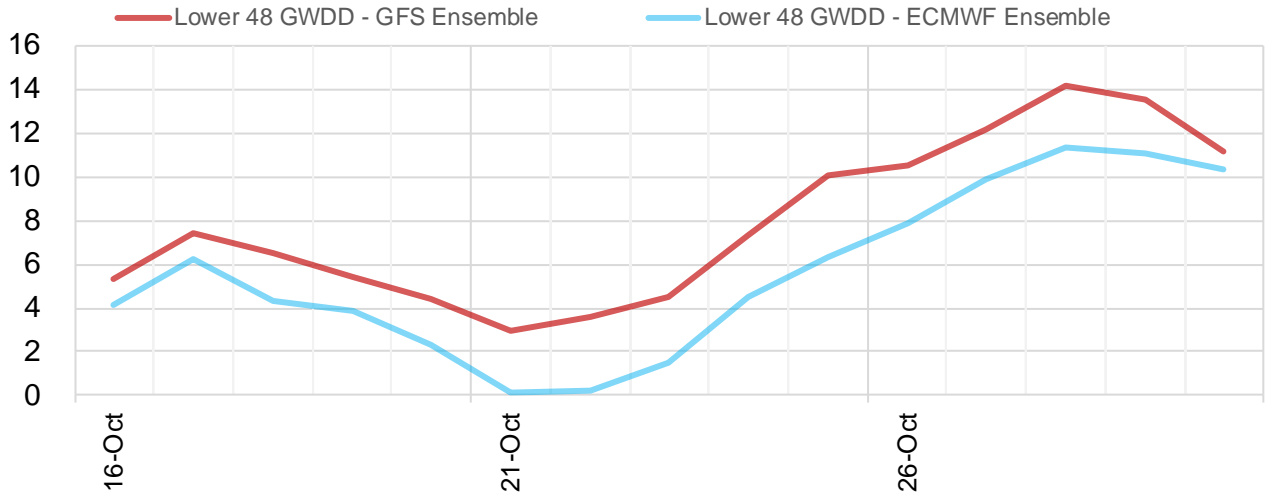
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.2	▼ -0.60	▼ -0.82

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	8.2	▲ 0.35	▲ 1.29

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.4	▲ 0.07	▲ 0.09

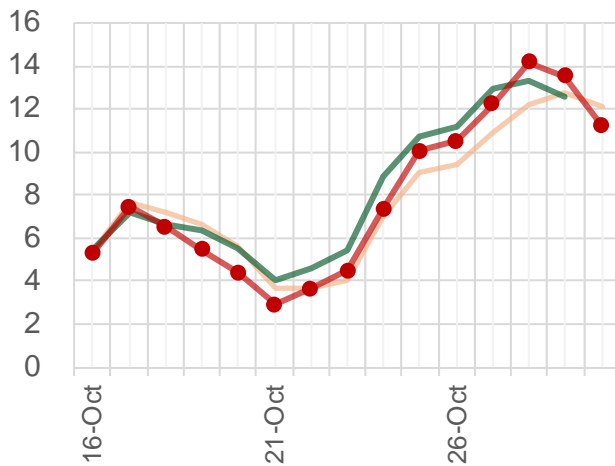
Short-term Weather Model Outlooks (00z)

Lower 48 TDD Forecast



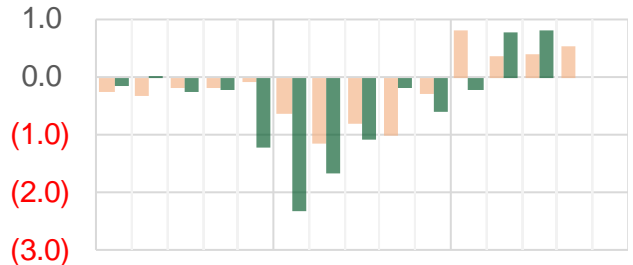
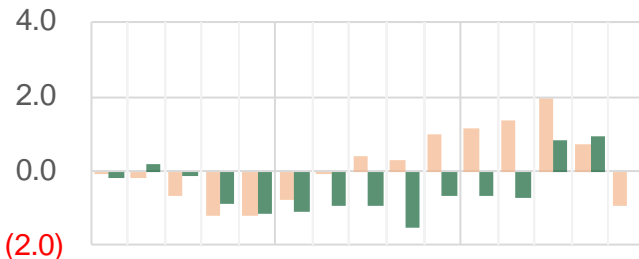
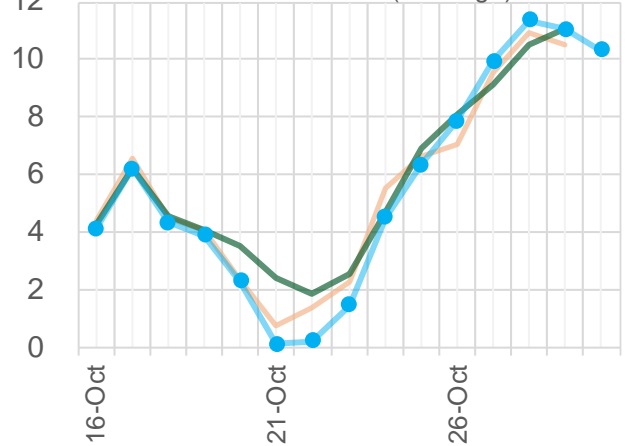
Lower 48 GWDD - GFS Ensemble

12H Ago 24H Ago Current



Lower 48 GWDD - ECMWF Ensemble

12H Ago 24H Ago Lower 48 GWDD (24H Ago)



Source: WSI, Bloomberg

Lower 48 Component Models

Daily Balances

	10-Oct	11-Oct	12-Oct	13-Oct	14-Oct	15-Oct	16-Oct	DoD	vs. 7D
Lower 48 Dry Production	82.8	84.1	85.5	86.8	87.8	88.4	87.9	▼-0.5	▲2.0
Canadian Imports	4.1	4.1	4.1	4.2	3.7	3.8	3.2	▼-0.6	▼-0.8
L48 Power	29.7	28.9	31.1	30.4	29.3	29.3	30.8	▲1.5	▲1.1
L48 Residential & Commercial	8.2	9.6	12.2	13.5	12.5	14.7	17.9	▲3.2	▲6.1
L48 Industrial	21.8	22.3	22.6	22.4	21.5	20.7	19.7	▼-1.0	▼-2.2
L48 Lease and Plant Fuel	4.6	4.6	4.7	4.8	4.8	4.9	4.8	▼0.0	▲0.1
L48 Pipeline Distribution	1.9	1.9	2.1	2.2	2.1	2.2	2.4	▲0.2	▲0.4
L48 Regional Gas Consumption	66.1	67.3	72.8	73.3	70.2	71.7	75.7	▲3.9	▲5.4
Net LNG Delivered	5.51	6.03	7.46	7.54	7.86	7.81	8.17	▲0.4	▲1.1
Total Mexican Exports	6.0	6.2	6.3	6.4	6.4	6.3	6.4	▲0.1	▲0.1
Implied Daily Storage Activity	9.3	8.6	3.1	3.7	7.0	6.3	0.8		
EIA Reported Daily Storage Activity									
Daily Model Error									

EIA Storage Week Balances

	11-Sep	18-Sep	25-Sep	2-Oct	9-Oct	16-Oct	WoW	vs. 4W
Lower 48 Dry Production	89.0	87.8	86.9	87.2	87.2	85.8	▼-1.4	▼-1.5
Canadian Imports	3.8	3.8	3.6	3.9	4.5	4.0	▼-0.5	▲0.0
L48 Power	35.4	33.5	30.8	30.6	30.7	30.0	▼-0.7	▼-1.4
L48 Residential & Commercial	8.4	8.0	9.9	9.6	13.6	11.6	▼-2.0	▲1.3
L48 Industrial	19.7	21.3	21.2	22.2	21.5	21.8	▲0.3	▲0.3
L48 Lease and Plant Fuel	4.9	4.8	4.8	4.8	4.8	4.7	▼-0.1	▼-0.1
L48 Pipeline Distribution	2.2	2.1	2.0	2.0	2.2	2.0	▼-0.1	▼0.0
L48 Regional Gas Consumption	70.5	69.7	68.6	69.1	72.8	70.1	▼-2.7	▲0.1
Net LNG Exports	5.2	7.3	5.8	6.8	7.5	6.9	▼-0.6	▲0.0
Total Mexican Exports	6.4	6.2	6.4	6.3	6.2	6.3	▲0.1	▲0.0
Implied Daily Storage Activity	10.8	8.3	9.6	8.9	5.2	6.5	1.2	
EIA Reported Daily Storage Activity	12.7	9.4	10.9	10.7	6.6			
Daily Model Error	-1.9	-1.1	-1.3	-1.8	-1.4			

Monthly Balances

	2Yr Ago Oct-18	LY Oct-19	Jun-20	Jul-20	Aug-20	Sep-20	MTD Oct-20	MoM	vs. LY
Lower 48 Dry Production	86.7	95.0	86.6	87.8	87.7	87.6	86.6	▼-1.0	▼-8.3
Canadian Imports	4.7	4.6	4.0	4.4	4.9	3.8	4.2	▲0.4	▼-0.5
L48 Power	28.8	30.7	35.0	43.8	40.6	33.3	30.3	▼-2.9	▼-0.4
L48 Residential & Commercial	16.1	15.2	8.8	8.0	7.7	8.7	13.0	▲4.3	▼-2.3
L48 Industrial	22.6	24.0	19.2	19.2	20.6	20.9	21.6	▲0.7	▼-2.4
L48 Lease and Plant Fuel	4.9	5.2	4.8	4.9	4.8	4.8	4.8	▼0.0	▼-0.5
L48 Pipeline Distribution	2.1	2.3	2.2	2.4	2.3	2.1	2.1	▲0.0	▼-0.1
L48 Regional Gas Consumption	74.5	77.4	70.1	78.4	76.1	69.8	71.8	▲2.0	▼-5.6
Net LNG Exports	3.3	6.7	4.0	3.3	4.0	5.9	7.2	▲1.3	▲0.6
Total Mexican Exports	5.0	5.5	5.7	6.1	6.3	6.4	6.3	▼-0.1	▲0.8
Implied Daily Storage Activity	8.6	10.0	10.9	4.4	6.2	9.4	5.5		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

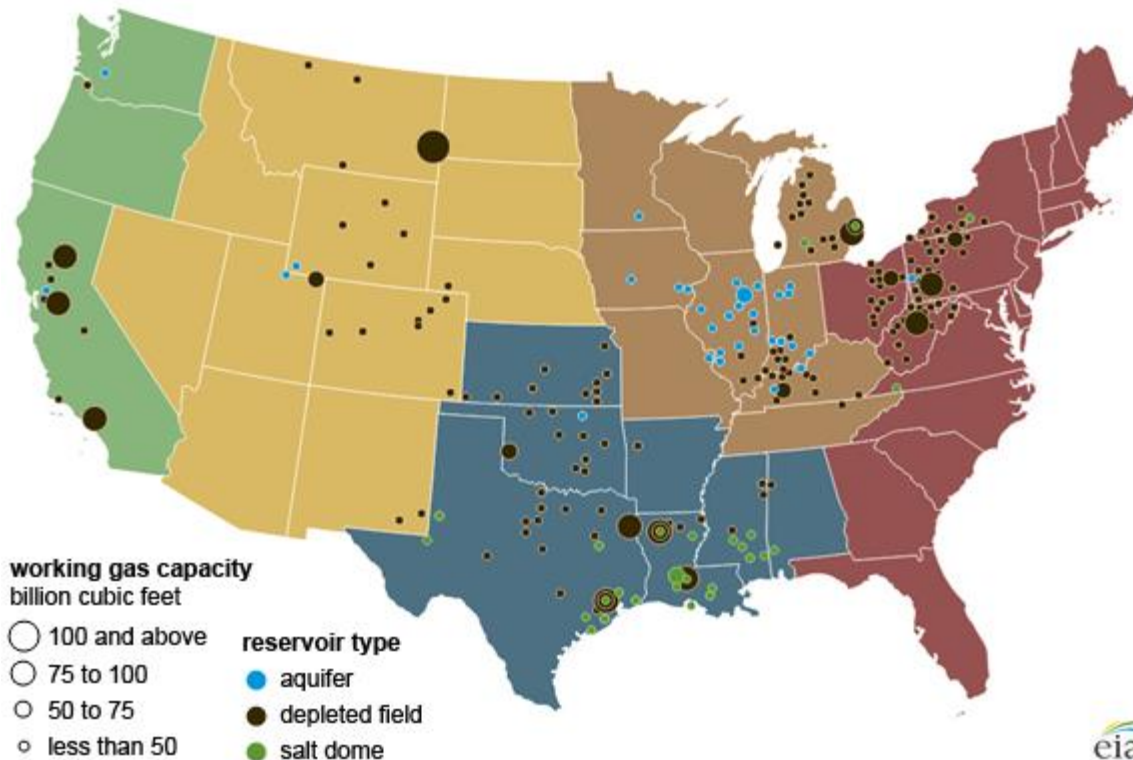
Regional S/D Models Storage Projection

Week Ending 16-Oct

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	6.2	1.6	7.8	55
East	0.3	1.6	1.9	14
Midwest	3.2	1.2	4.4	31
Mountain	3.6	-3.2	0.4	3
South Central	-1.4	2.1	0.8	5
Pacific	0.4	-0.1	0.3	2

*Adjustment Factor is calculated based on historical regional deltas

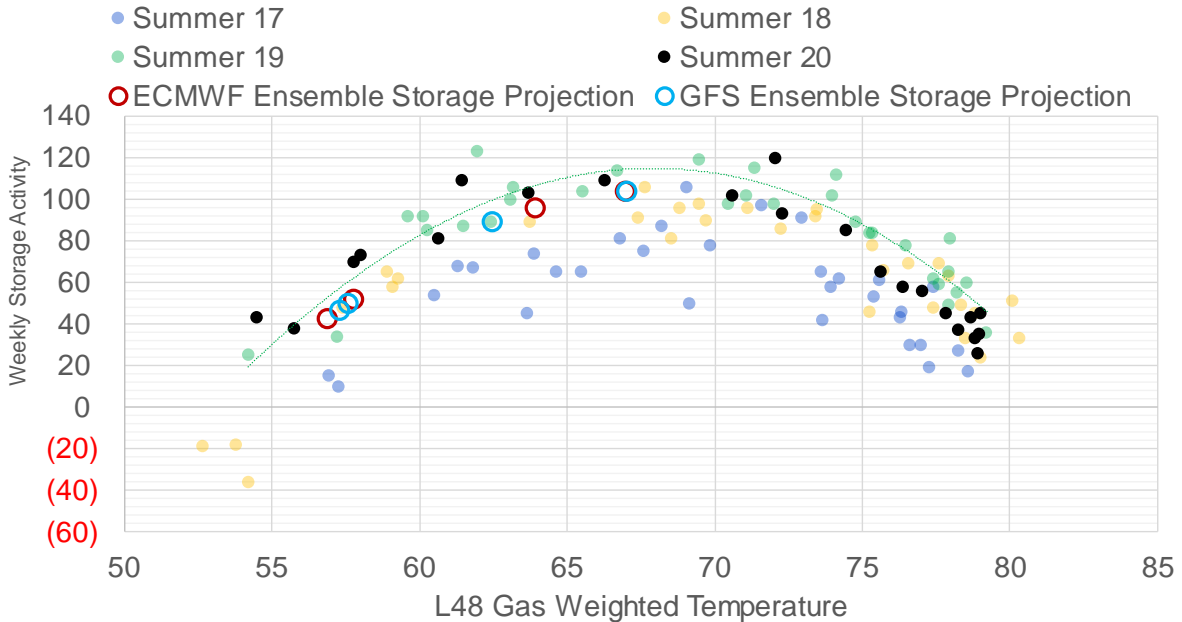
U.S. underground natural gas storage facilities by type (July 2015)



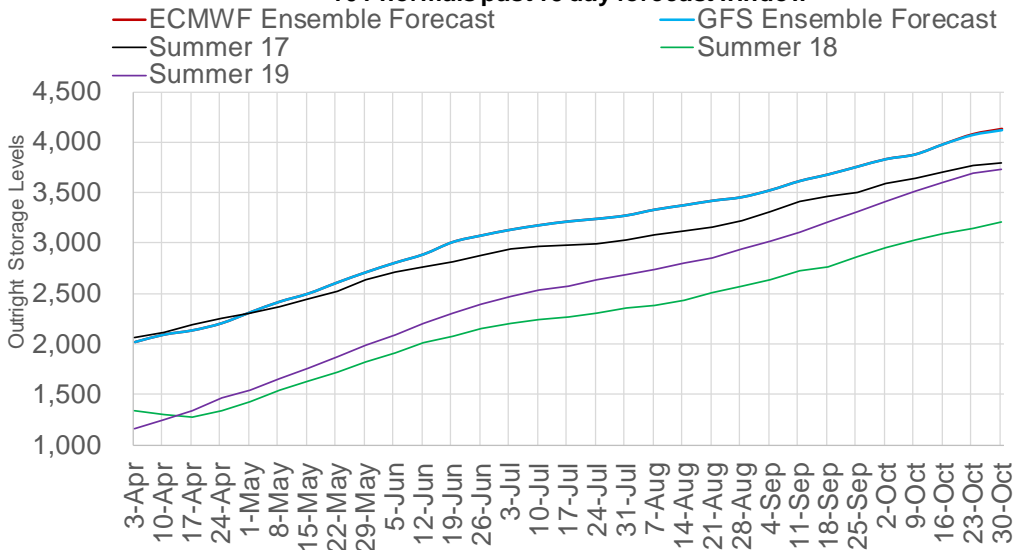
Weather Model Storage Projection

Next report and beyond	
Week Ending	Week Storage Projection
23-Oct	93
30-Oct	49
06-Nov	46

Weather Storage Model - Next 4 Week Forecast



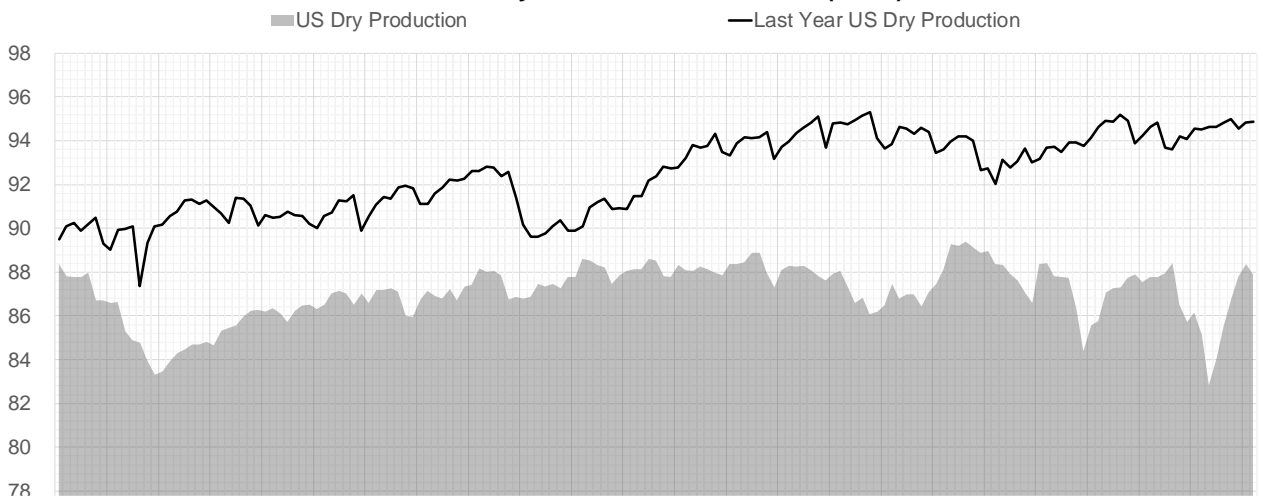
Weather Based End of Winter Projection (Bcf) 10Y normals past 15 day forecast window



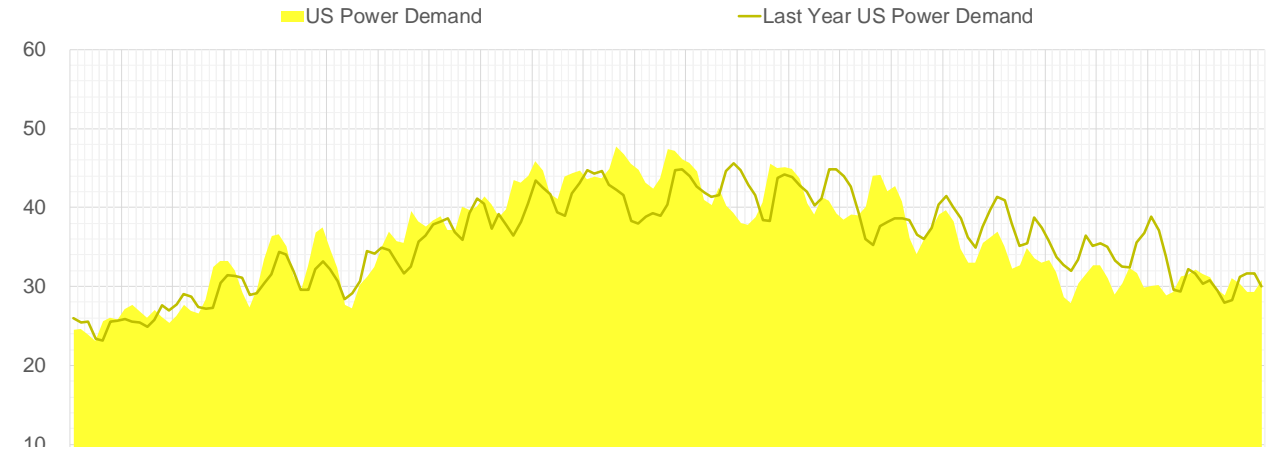
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Supply – Demand Trends

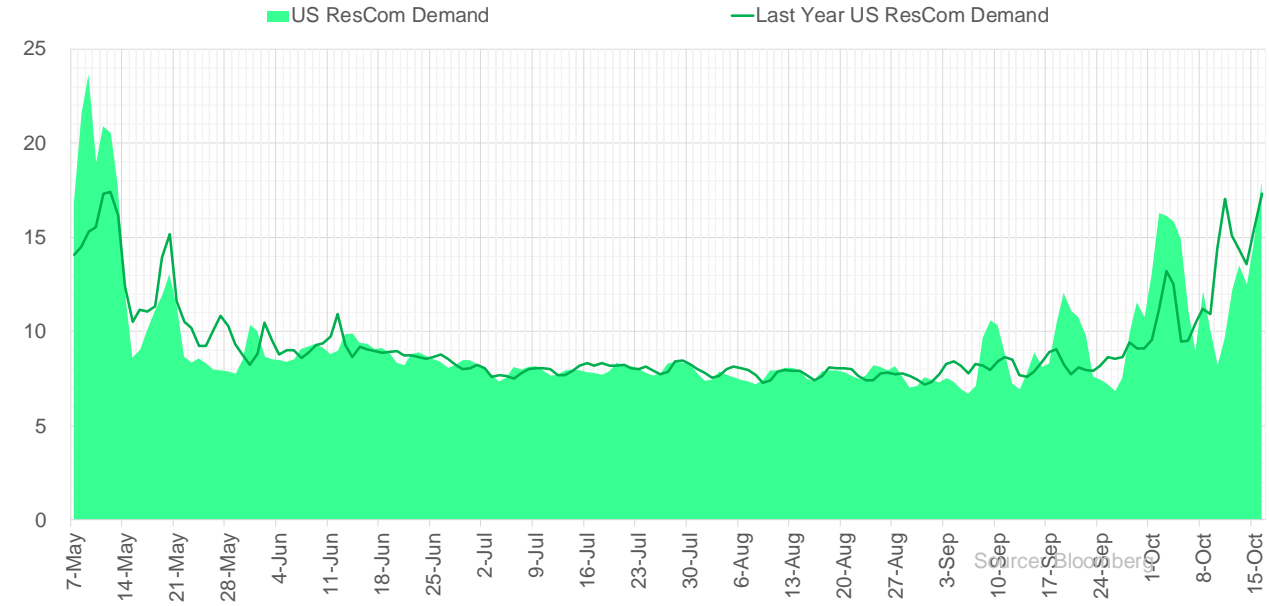
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)

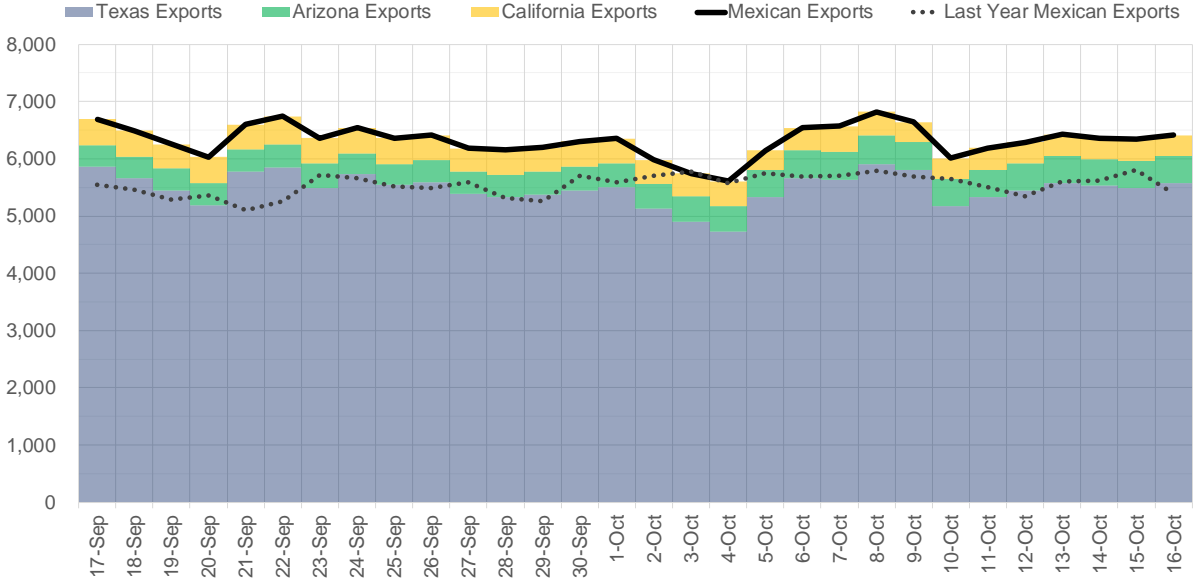


US Daily ResCom Consumption (Bcf/d)

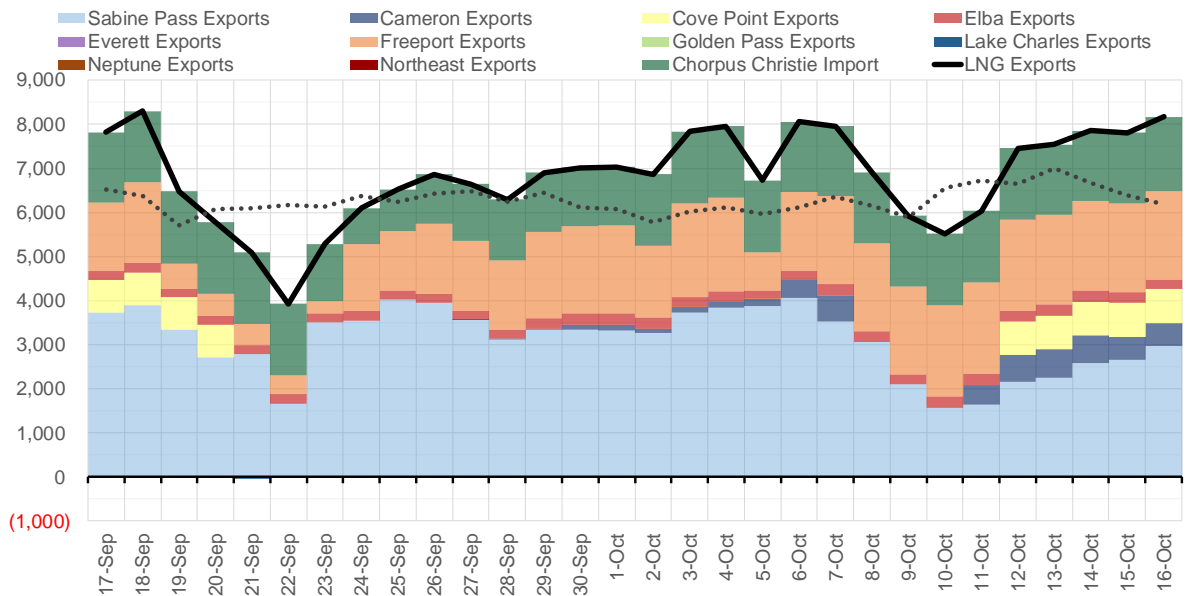


Source: Bloomberg

Mexican Exports - Last 30 days (MMcf/d)



Net LNG Exports - Last 30 days (MMcf/d)



Source: Bloomberg

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Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

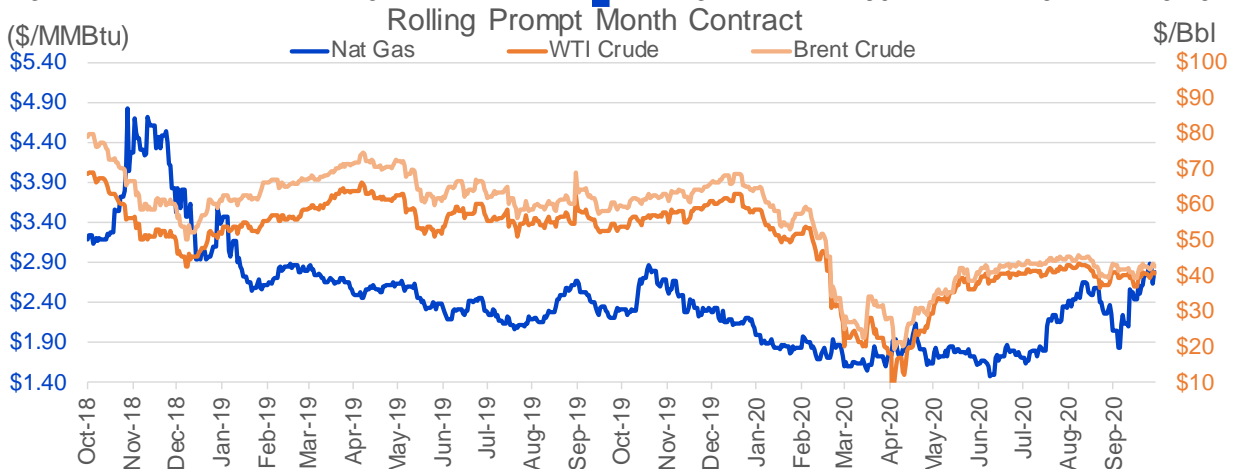
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
3	2021	C	5.00	8500	11	2020	P	2.00	56399
11	2020	C	3.00	8244	3	2021	P	2.00	35322
3	2021	C	4.75	8000	11	2020	C	3.25	32092
11	2020	P	2.00	5611	11	2020	C	3.50	31827
11	2020	P	2.25	5233	12	2020	P	2.00	31734
11	2020	C	3.50	4601	3	2021	C	5.00	31297
11	2020	C	3.25	4341	3	2021	C	6.00	30626
11	2020	P	2.50	3971	1	2021	C	4.50	27919
11	2021	C	4.00	3800	3	2021	C	3.25	27150
11	2021	C	5.00	3800	4	2021	C	5.00	26770
12	2020	C	4.00	3046	12	2020	P	2.50	26209
11	2020	P	2.60	2735	3	2021	C	4.00	26182
11	2020	P	1.75	2550	1	2021	C	3.50	26171
10	2021	C	4.00	2350	3	2021	C	7.00	25903
10	2021	C	3.25	2250	11	2020	C	4.00	24343
12	2020	C	3.25	2021	11	2020	C	3.00	23474
12	2020	C	5.00	1969	12	2020	C	4.00	23130
11	2020	P	2.75	1875	11	2020	P	2.25	22041
11	2020	C	3.75	1781	2	2021	C	5.00	21905
11	2020	P	2.40	1715	11	2020	C	5.00	21903
11	2020	C	2.85	1516	11	2020	P	1.75	21462
11	2020	P	2.70	1504	1	2021	C	6.00	21110
4	2021	C	4.50	1200	3	2021	C	3.00	20761
2	2022	C	5.00	1200	3	2021	C	3.50	19972
11	2020	P	2.30	1197	12	2020	C	4.50	19805
12	2020	C	3.75	1141	4	2021	C	4.00	19307
11	2020	P	2.55	1117	12	2020	C	3.75	19055
12	2020	P	3.25	1110	1	2021	P	2.25	18734
5	2021	C	4.00	1100	11	2020	C	2.75	18522
1	2022	C	4.00	1100	1	2021	C	5.00	18184
2	2022	C	4.00	1100	2	2021	P	2.25	17559
3	2022	C	4.00	1100	1	2021	P	2.50	17542
11	2020	C	4.00	1082	2	2021	C	3.50	16993
12	2020	C	5.50	1059	12	2020	C	3.50	16885
12	2020	P	2.50	1059	1	2021	C	3.00	16885
12	2021	C	4.00	1000	1	2021	C	3.75	16682
12	2021	C	5.00	1000	11	2020	P	2.50	16111
1	2022	C	5.00	1000	2	2021	P	2.50	15271
3	2022	C	5.00	1000	11	2020	P	2.65	14937
3	2021	P	2.50	900	12	2020	C	5.00	14733
11	2020	C	2.80	855	3	2021	P	2.50	14464
12	2020	C	4.75	827	8	2021	C	4.00	14457
2	2021	C	4.00	800	12	2020	P	1.50	14450
5	2021	C	3.75	795	1	2021	C	7.00	14296
12	2020	P	3.00	784	4	2021	C	3.00	14210
7	2021	C	3.90	755	4	2021	P	2.00	14097
4	2021	C	3.90	750	5	2021	C	3.00	13756
5	2021	C	3.90	750	11	2020	C	2.85	13640
6	2021	C	3.90	750	2	2021	C	4.00	13633
					11	2020	P	2.8	13460.75

Source: CME, ICE

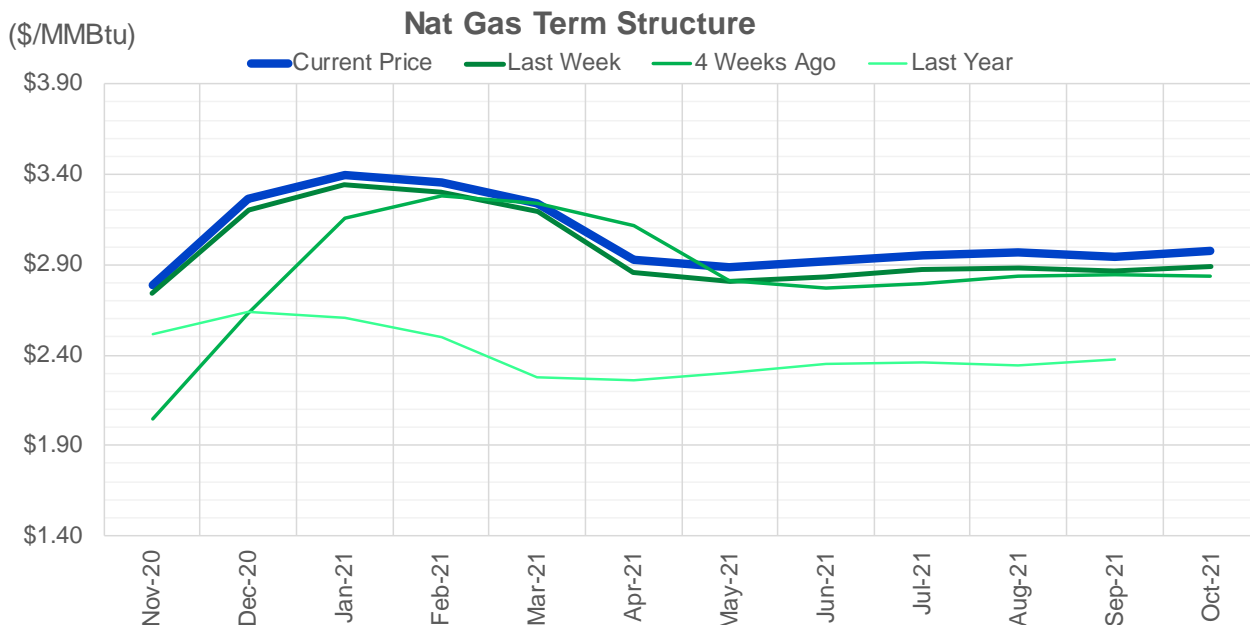
Nat Gas Futures Open Interest

CME and ICE Combined

CME Henry Hub Futures (10,000 MMBtu)				ICE Henry Hub Futures Contract Equivalent (10,000 MM			
	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change
NOV 20	99940	121000	-21060	NOV 20	72702	75350	-2648
DEC 20	166636	164736	1900	DEC 20	75050	75473	-422.5
JAN 21	203000	203115	-115	JAN 21	89727	90446	-719.25
FEB 21	82760	80955	1805	FEB 21	64058	64225	-167
MAR 21	135488	136952	-1464	MAR 21	84393	84872	-479
APR 21	88718	89917	-1199	APR 21	70170	69840	329.75
MAY 21	44533	44313	220	MAY 21	60880	61116	-235.75
JUN 21	33023	33038	-15	JUN 21	55555	55482	72.5
JUL 21	26111	25500	611	JUL 21	57561	57539	22.5
AUG 21	26552	25781	771	AUG 21	60326	60465	-139
SEP 21	37379	37561	-182	SEP 21	55714	55624	90
OCT 21	87377	87592	-215	OCT 21	72456	72084	372.75
NOV 21	32461	32631	-170	NOV 21	48702	48729	-27.25
DEC 21	27449	27233	216	DEC 21	46370	46494	-124
JAN 22	29111	28628	483	JAN 22	42316	41601	715
FEB 22	16888	16346	542	FEB 22	34656	34178	478
MAR 22	19091	18910	181	MAR 22	37789	37314	475.5
APR 22	21653	22237	-584	APR 22	35905	35391	513.75
MAY 22	8320	7831	489	MAY 22	27984	27612	372.25
JUN 22	4795	4717	78	JUN 22	26791	26439	352.5
JUL 22	3873	3732	141	JUL 22	28370	28106	263.5
AUG 22	2724	2657	67	AUG 22	26760	26241	518.75
SEP 22	2533	2374	159	SEP 22	25960	25639	320.5
OCT 22	4018	4251	-233	OCT 22	28962	28358	604.5
NOV 22	3295	3136	159	NOV 22	24756	24352	404.25
DEC 22	3289	3155	134	DEC 22	28428	28114	314.5
JAN 23	3003	3012	-9	JAN 23	13992	13972	19.75
FEB 23	908	897	11	FEB 23	13182	13164	18.25
MAR 23	831	883	-52	MAR 23	13444	13413	31
APR 23	2447	2445	2	APR 23	12460	12445	15.25



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	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
Current Price	\$2.784	\$3.268	\$3.399	\$3.359	\$3.236	\$2.929	\$2.889	\$2.919	\$2.955	\$2.965	\$2.947	\$2.980
Last Week	\$2.741	\$3.204	\$3.347	\$3.305	\$3.192	\$2.858	\$2.804	\$2.833	\$2.871	\$2.879	\$2.865	\$2.893
vs. Last Week	\$0.043	\$0.064	\$0.052	\$0.054	\$0.044	\$0.071	\$0.085	\$0.086	\$0.084	\$0.086	\$0.082	\$0.087
4 Weeks Ago	\$2.048	\$2.633	\$3.154	\$3.285	\$3.242	\$3.116	\$2.813	\$2.771	\$2.798	\$2.834	\$2.845	\$2.833
vs. 4 Weeks Ago	\$0.736	\$0.635	\$0.245	\$0.074	-\$0.006	-\$0.187	\$0.076	\$0.148	\$0.157	\$0.131	\$0.102	\$0.147
Last Year	\$2.320	\$2.517	\$2.635	\$2.603	\$2.499	\$2.274	\$2.260	\$2.302	\$2.350	\$2.360	\$2.344	\$2.372
vs. Last Year	\$0.464	\$0.751	\$0.764	\$0.756	\$0.737	\$0.655	\$0.629	\$0.617	\$0.605	\$0.605	\$0.603	\$0.608

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.85	3.61	1.76
TETCO M3	\$/MMBtu	1.45	2.44	0.99
FGT Zone 3	\$/MMBtu	1.45	2.79	1.34
Zone 6 NY	\$/MMBtu	1.45	2.59	1.14
Chicago Citygate	\$/MMBtu	2.24	2.61	0.37
Michcon	\$/MMBtu	1.95	2.55	0.60
Columbia TCO Pool	\$/MMBtu	1.97	2.34	0.37
Ventura	\$/MMBtu	2.20	2.62	0.42
Rockies/Opal	\$/MMBtu	1.47	2.53	1.06
El Paso Permian Basin	\$/MMBtu	0.04	1.35	1.31
Socal Citygate	\$/MMBtu	4.80	3.17	-1.63
Malin	\$/MMBtu	2.20	3.13	0.93
Houston Ship Channel	\$/MMBtu	2.46	2.72	0.26
Henry Hub Cash	\$/MMBtu	2.18	2.56	0.38
AECO Cash	C\$/GJ	2.19	2.22	0.03
Station2 Cash	C\$/GJ	2.13	4.76	2.63
Dawn Cash	C\$/GJ	2.19	2.62	0.43

Source: CME, Bloomberg

	Units	Current Price	vs. 4 Weeks			
			vs. Last Week	Ago	vs. Last Year	
NatGas Jan/Apr	\$/MMBtu	-0.47	▲ 0.019	▲ 0.002	▼ -0.023	
NatGas Mar/Apr	\$/MMBtu	-0.307	▲ 0.027	▼ -0.610	▼ -0.591	
NatGas Oct/Nov	\$/MMBtu	0.68	▲ 0.043	▲ 0.098	▲ 0.613	
NatGas Oct/Jan	\$/MMBtu	1.30	▲ 0.052	▲ 0.061	▲ 0.935	
WTI Crude	\$/Bbl	40.59	▼ -0.010	▼ -0.520	▼ -13.190	
Brent Crude	\$/Bbl	42.71	▼ -0.140	▼ -0.440	▼ -16.710	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	117.57	▼ -1.760	▲ 1.670	▼ -77.140	
Propane, Mt. Bel	cents/Gallon	0.53	▲ 0.007	▲ 0.029	▲ 0.063	
Ethane, Mt. Bel	cents/Gallon	0.21	▲ 0.018	▲ 0.017	▲ 0.027	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.100	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -4.500	